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Investor Protection and the Value Effects of Bank Merger Announcements in Europe and the US[†]

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2 November 2007

Abstract

Investor protection regimes have been shown to partly explain why the same type of corporate event may attract different investor reactions across countries. We compare the value effects of large bank merger announcements in Europe and the US and find an inverse relationship between the level of investor protection prevalent in the target country and abnormal returns that bidders realize during the announcement period. Accordingly, bidding banks realize higher returns when targeting low protection economies (most European economies) than bidders targeting institutions which operate under a high investor protection regime (the US). We argue that bidding bank shareholders need to be compensated for an increased risk of expropriation by insiders which they face in a low protection environment where takeover markets are illiquid and there are high private benefits of control.

JEL Classification: G21, G34, G14, G28

Keywords: banks, mergers, investor protection, corporate governance

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1 Introduction

Recent empirical work has proposed that the legal and regulatory environment of a country can help explain different investor reactions to similar-type events (Rossi and Volpin, 2004; Moeller and Schlingemann, 2005). For a sample of 204 bank mergers between 1996 and 2004, this study compares the acquirer returns associated with US and European bank merger announcements and demonstrates that more sophisticated investor protection laws in the target country lower the returns that bidders earn in the takeover market. Given that the value of completed financial sector M&A was more than \$6 trillion over the past twenty years (Thomson Financial) and given the pivotal role of banks as the main providers of corporate finance and governance advice to the firms which they fund, establishing a clearer understanding of investor reactions to bank mergers is important. In an efficient market, where assets are priced rationally, the revaluation effects of bank merger announcements may serve as an accurate assessment of the net benefits that shareholders can extract from a proposed transaction. However, knowledge accumulation about the antecedents of value creation for US and European bank M&A remains patchy (Amel et al., 2004).

The literature examining the shareholder wealth implications of the market for corporate control has repeatedly reported investor skepticism about any gains associated with US-focused bank mergers. James and Weir (1987), Houston and Ryngaert (1994), DeLong (2001), Cornett et al. (2003), Anderson et al. (2004), DeLong and DeYoung (2007), and others examine the initial investor reaction to bank merger announcements and find bidding bank shareholders realize losses in the order of 2%. In Europe, by contrast, studies tend to find more favorable market reactions to bank consolidation. Beitel et al. (2004), Lepetit et al. (2004), and Karceski et al. (2005) offer evidence that European bank M&A has no effect on firm value, while others report that bidder returns associated with bank acquisitions in Europe are only marginally negative (Campa and Hernando, 2006) or even positive (Cybo-Ottone and Murgia, 2000). To date, there is no convincing explanation for what might drive different investor reactions to bank mergers in Europe and the US. In this paper, we argue that systemic differences in law and regulation between countries as encapsulated in investor protection regimes partially determine investor expectations about the value-creating potential of a bank merger at the time of its announcement.

Dyck and Zingales (2004) point out that investor protection creates and destroys opportunities for expropriation of outside investors (creditors and minority shareholders) by insiders (managers and majority shareholders). This is because investor protection determines the value of the private benefits of control that insiders may enjoy. Depending on the degree of agency conflict, expropriations by insiders can take forms of varying severity (La Porta et al., 2000; Morck et al., 1990)—ranging from

asset stripping to wasteful behavior such as value-destroying acquisition strategies. However, when investors see their claims protected by the law and enforceable through the legal system, demand for certain types of financial assets is likely to increase (Hope, 2003), thus, facilitating the development of different governance systems. La Porta et al. (2002) find that countries with more elaborate disclosure and accounting rules have more valuable stock markets and more IPOs (market-based governance), while countries with stronger creditor protection laws have larger credit markets (bank-based governance).

Rossi and Volpin (2004) provide a link between governance systems and the market for corporate control—a vital element of market-based governance which acts to replace failing management (Kini et al., 2004; James and Weir, 1987). The authors observe increased levels of takeover market activity and a higher propensity for bidding wars in countries with more elaborate shareholder protection rights, possibly because these regimes facilitate a more freely-operating market for corporate control. Moeller and Schlingemann (2005) find that acquisition targets operating within more liquid takeover markets diminish the announcement period returns that bidding shareholders realize. For a sample of cross-border deals involving targets in the UK, Canada, France and Germany, the authors show that acquisitions of UK companies attract the least favorable market reaction. They attribute the low bidder returns for UK acquisitions to lower agency conflict in markets where targets benefit from sophisticated shareholder protection rights as well to a higher likelihood of bidding wars for attractive targets causing merger-related gains to be bid away. By the same token, Starks and Wei (2004) argue that bidders have to pay higher premiums for targets located in relatively more sophisticated protection environments in an effort to compensate target shareholders for poorer governance practices following mergers.¹

The evidence on the valuation effects of mergers in different investor protection regimes is rather limited for banking firms. DeLong (2003), in an international sample of bank merger activity, finds higher abnormal returns for a portfolio of non-US acquirers (including Japanese and European banks) vis-à-vis bidding banks in the US. While the author suggests that this result is driven by underlying differences in financial systems, she does not control for the impact of investor protection on her

¹Rather than the negative value effect of investor protection in the target's country on bidder returns hypothesized in this study, the opposite effect is also conceivable. Dahlquist et al. (2003), for example, argue that bidders may be rewarded for acquisitions in high protection economies owing to the higher company disclosure standards as well as lower agency and transaction costs associated with M&A in these regulatory environments. While Bris and Cabolis (2004) find some evidence consistent with this in a sample of cross-border mergers—the authors detect higher bidder returns for M&A targeted at companies in countries where corruption is less widespread—they do not find bidder returns to increase with more general measures of investor protection (such as creditor or shareholder rights).

findings. Similarly, Kiyamaz (2004) reports that the wealth effects for bidding institutions vary with the location of the target. In a sample of cross-border acquisitions made by US financial firms, deals targeted at financial institutions in Latin America and East Asia lead to higher value gains for bidding firms. Again, differences in investor protection are not among the conditions examined by the author.

Our findings can be summarized as follows. The main finding of the paper is a negative market reaction to bidders that leverage acquisitions valued at more than \$100 million in the context of high investor protection regimes (i.e. the US and UK), while bidders targeting low protection environments (i.e. most European economies) realize positive abnormal returns. We interpret our finding of negative bidder announcement returns to deals where targets operate under a high investor protection regime as evidence of acquirers finding it difficult to capture acquisition-related gains from a target in the liquid (and, hence, competitive) takeover markets associated with this type of corporate governance system (see La Porta et al., 2002; Moeller and Schlingemann, 2005). Accordingly, the bidder losses signal a favorable stock market assessment of the efficiency of internal governance and external control mechanisms employed by target institutions. Conversely, in low investor protection environments, a less freely-operating market for corporate control lets bidders earn superior announcement returns by compensating them for the higher private benefits of control, as well as higher agency and information asymmetry costs.

We also find that bidding bank losses in the context of activity-diversifying bank mergers are more prevalent when targeted at European rather than at US institutions. We suggest that this is because financial conglomeration increases investor concerns over their ability to assess the true value of a target and the synergistic benefits of a proposed transaction if the target's disclosure practices are weak. Further, investor preference for cash-financed bank mergers is particularly strong in Europe, thus, reflecting the higher risk of expropriation associated with equity in a low investor protection environment. Also, we find evidence that European cross-border M&A creates bidder wealth if acquisition targets are located in a less sophisticated protection environment than their acquirers. Finally, another contribution of our paper is that we can shed some light on the different value effects surrounding bank mergers in Europe and the US which to date have largely been left unaccounted for in the bank merger literature.

In two recent papers related to ours, Bris and Cabolis (2004) and Starks and Wei (2004) examine the value effects of cross-border mergers. Both papers find that changes in targets' investor protection regimes—the distinctive feature of cross-border M&A—generate statistically significant valuation effects. However, our approach differs in two aspects: First, we do not restrict our analysis to cross-border deals and, hence, argue that any effect of target firm protection laws on bidder returns

exists independently of targets switching regimes in the post-merger period. For instance, a US acquirer seeking to bid for an Italian credit institution will be equally concerned about the target’s governance arrangements (including the possibility of expropriation by insiders or bidding wars) as an Italian bidder when seeking acquisitions in Italy. Second, because our analysis is not concerned with target returns,² we effectively examine the expected value gains that bidders may extract from M&A in different economic environments. In this context, a target’s level of investor protection (which may or may not be identical to that of the acquirer) proxies the overall benefits and costs associated with acquisition activities that bidding banks are likely to encounter in different legal environments across which the effectiveness of governance and disclosure practices may vary greatly.

The following section introduces the bank merger sample and research methodology. Subsequently, univariate tests are presented to gauge the market valuation effects of bank mergers in Europe and the US by deal type and by level of investor protection before the findings of cross-sectional analyses are discussed.

2 Data and Methodology

2.1 M&A Data

Our sample of bank mergers was obtained from Thomson Financial’s M&A database (SDC Platinum). In order to be sampled, a merger must have been announced between 1996 and 2004. We refer to the year of the deal announcement as the year of the merger or acquisition. Only transactions that have been completed as of 31 May 2005 were included in the sample. Both acquirers and targets are listed in the US or Europe (i.e. EU-15 countries plus Switzerland). While acquirers are commercial banks, bank holding companies and credit institutions, targets may also be insurance companies (life and non-life), mortgage bankers, as well as security brokers. This enables us to assess the performance effects of consolidation across different financial product markets. While we use the terms merger and acquisition

²We follow previous research (e.g., James and Weir, 1987; Rossi and Volpin, 2004; DeLong, 2003; Campa and Hernando, 2006) by not examining the returns that target shareholders realize. However, on a theoretical level, we expect target shareholders to realize higher abnormal announcement returns in more advanced investor protection environments where more developed capital markets, with more hostile takeovers and bidding wars (La Porta et al., 2002), drive up acquisition premiums (Moeller and Schlingemann, 2005). Also, we expect wealth transfers from bidding to target bank shareholders to be more pronounced for acquisitions motivated by managerial hubris (i.e. when bidding managers overestimate the value creating potential of M&A) or, equally, by entrenchment (e.g. when managers favor corporate growth over profitability). Acquisitions are more likely to lead to lower value gains for target shareholders, on the other hand, when acquisitions are made in low protection environments (Bris and Cabolis, 2004) or are purely synergy-oriented.

interchangeably throughout this study, we only included majority acquisitions which resulted in the acquirer having a stake of at least 50% in a target institution. Finally, for reasons of data availability, we restricted the sample to transactions with an underlying deal value of at least \$100 million in constant 2004 \$.

We reduced our initial sample of 313 bank mergers after omitting cases for one of the following reasons: (i) share prices are not available on Datastream, (ii) the target is a failing institution (and the transaction is, thus, involuntary) or (iii) there are less than 90 trading days in between separate merger announcements made by the same bidder. We retain serial acquirers in our sample as a sizable share of M&A activities is due to a small number of serial acquirers whose exclusion would forestall opportunities to analyze this large and very relevant share of bank M&A.

[Table 1]

Table 1 presents our final bank merger sample. Panel A shows that while the US was responsible for most of the M&A activity over the sample period, the mean value of acquisitions made by European banks was higher in almost every sample year. Accordingly, European banks account for 26% of the number of M&A deals, but for 35% of the overall value of M&A activity during the sample period. The smaller average deal values in the US are the legacy of regulatory restrictions on the geographic scope and product mix of local banks that had not been completely lifted before the mid-nineties (Group of Ten, 2001).

The geographic composition of the sample is given by Panel B of Table 1. The US dominates the sampled transactions with 151 acquisitions, while 53 deals are of European origin. However, the predominance of US merger activity in our sample does not permit any conclusions as to the general pace of bank consolidation in Europe. The consolidation of bank assets in countries like Germany, France and Italy over the period of study has largely involved non-listed public sector and cooperative institutions. These institutions face increasing pressures to consolidate as a result of declines in government ownership and the phasing out of public guarantees of their liabilities (CEPR, 2005) as well as because of monetary integration across most parts of the EU (Allen and Song, 2005).³

³For a general overview of the main forces which have driven consolidation in the EU, see CEPR (2005). Berger et al. (1999) provide an extensive discussion of similar issues for the US market.

2.2 Investor Protection

We proxy the level of investor protection by two indexes developed by La Porta et al. (1998). First, we use an index of anti-director rights that are prevalent in the target institution’s country and bolster the interests of shareholders against those of management. This measure revolves around voting procedures for the election of directors and the approval of major corporate issues (see Table 2). Based on six different anti-director rights, the index varies from 0 to 6 with higher numbers indicating better protection for shareholders from expropriation by management. We follow Rossi and Volpin (2004) and multiply the anti-director index by a measure of the rule of law which rates the law and order tradition in the target country (also taken from La Porta et al., 1998); the resulting variable is labeled ‘shareholder protection’.⁴

[Table 2]

The second index measures the quality of national accounting standards. This index reflects the inclusion of 90 accounting items in national practices and, thus, ranges from 0 to 90 where higher values indicate better investor protection. Accounting standards are at the core of corporate governance because they make company disclosures interpretable and contracts between investors and management (which tend to rely on some measure of company size or profitability) meaningful (La Porta et al., 2000).

Panel B of Table 2 presents the country scores for both investor protection measures. Out of the sample countries, common-law countries (the UK & the US) exhibit very high standards of investor protection, while Italy, Germany and Belgium (civil-law countries) score relatively low in this respect. As for the quality of accounting standards, Table 2 suggests that Sweden, the UK and the US have leading positions while corporate disclosure practices lack transparency in Portugal, Greece and Austria.

[Table 3]

Although the two investor protection indices measure somewhat different institutional characteristics, there is a strong association between the two measures. First, this is evident in a strong correlation between shareholder protection and accounting quality ($r=0.79$; significant at 1%). Second, Table 3 classifies deals relative to the sample’s median values of shareholder protection and accounting quality and shows that both measures consistently describe target countries’ protection levels as either

⁴While this index does not change over time, we do not expect the underlying variables to vary greatly over the sample period. Relatively few deals occurred after the passing of the Sarbanes-Oxley Act in 2002 which, if anything, only reinforced the position of the US as a high investor protection economy.

above- or below-median for most transactions (196 or 96%). Only in eight cases do the two measures come to a conflicting assessment when acquisitions that are targeted at above-median accounting environments are classified as below-median in terms of shareholder protection. For instance, this is the case for both Switzerland and Germany where there is a combination of relatively weak investor protection laws and strong law enforcement that is common to civil-law countries and reflected in the high accounting standards measure.

2.3 Methodology

To analyze investor reactions to bank M&A, we employ a market model of abnormal returns (AR_{it}) which assumes a linear relationship between the expected return on security i (R_{it}) and the return on a market portfolio (R_{mt}):

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt}. \quad (1)$$

We calculate abnormal shareprice performance for different time periods surrounding the announcement date supplied by Thomson Financial. Market model parameters are estimated using 100-day daily return observations starting from 121 days to 21 days before the acquisition announcement. Market returns are based on the national bank-sector indexes provided by Datastream. When determining statistical significance, we follow Dodd and Warner (1983) and standardize abnormal returns by the square root of their estimation period return variance ($\hat{\sigma}_i$):

$$SAR_{it} = AR_{it} / \hat{\sigma}_i \sqrt{1 + \frac{1}{L_i} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{m=1}^{L_i} (R_{mt} - \bar{R}_m)^2}}. \quad (2)$$

This procedure prevents securities with large variances from dominating the test. Subsequently, we use the abnormal return statistics reported in Boehmer et al. (1991) to correct for increases in the variance of abnormal returns that is common for merging parties at announcement. Failure to account for event-induced increases in variance leaves tests misspecified, while there is only a small loss of statistical power associated with using the following procedure if historic and event window variance are identical (Cowan and Sergeant, 1996),

$$\sigma_{SAR_t} = \sqrt{\sum_{i=1}^n \left(SAR_{it} - \sum_{i=1}^n SAR_{it}/n \right)^2 / n(n-1)}. \quad (3)$$

This yields the following test statistic:

$$z = \sum_{i=1}^n \frac{SAR_{it}/n}{\sigma_{SAR_t}}. \quad (4)$$

As a robustness test, we account for the non-normal distribution of security returns by using a sign test as suggested in Corrado (1989) to detect abnormal share price performance. The use of non-parametric test statistics makes inferences less sensitive to the effects of outliers.

3 Empirical Results: Bidder Abnormal Returns

Table 4 presents the cumulative abnormal returns (CAR) associated with different event window specifications during the announcement period of bank mergers. Bidding bank shareholders realize negative abnormal returns over the various event window lengths reported. For example, on the day of the acquisition announcement ($t=0$), mean abnormal returns are -0.93% against the national bank sector index (statistically significant at the 1% level according to both the t -statistic and the rank test). Collectively, the results indicate that investors are skeptical about acquirers gaining from bank M&A even though the magnitude of abnormal shareprice performance is less pronounced over longer examination periods. Mean abnormal returns for the 3-, 5- and 11-day periods are -0.50%, -0.32% and -0.18%, respectively. Our results for 26-day CAR (-0.12%), by comparison, are ambiguous—with the rank statistic significant, but not the t -test.

[Table 4]

Next, we consider the value implications of bank merger activities in the context of different investor protection environments and different types of deals. The following section presents preliminary findings on how the laws and regulation prevalent in target countries explain bidder returns in Europe and the US, before we consider the specific effects of activity diversification, geographic diversification and takeover finance.

3.1 Announcements Returns and Investor Protection

If investor protection regimes impact a priori expectations about the value-creating potential of a proposed transaction, we expect bank merger announcements targeting European credit institutions to elicit a different market reaction than merger announcements aimed at US banks. This is because the competitive bidding conditions associated with targets in high protection economies such as the US may severely restrict the ability of bidders to extract gains from acquisitions (see Rossi and Volpin, 2004; Moeller and Schlingemann, 2005). Consequently, we hypothesize that US bidders (because they tend to target US institutions) realize abnormal returns that are negative on average. Low investor protection environments, on the other hand, suffer from increased agency conflict and, thus, exhibit less liquid markets for corporate control (La Porta et al., 1998). European bidders are likely to benefit from subdued competition levels for attractive acquisition targets by gaining access to higher abnormal returns in the takeover market than those bidders that predominantly target high protection economies.

Panel A of Table 5 shows that roughly three-quarters of bank M&A stem from acquirers located in

the US. The dominance of US bidders in our sample is due to continued overcapacity in the US retail banking industry—a direct result of restrictions on inter-state banking that were kept intact until the 1994 Riegle-Neal Interstate Banking and Efficiency Act. Further, non-listed institutions (for which abnormal returns cannot be estimated) play a key role in the consolidation of the European banking industry. France and Italy, for example, each have sizable cooperative banking sectors, and savings banks lead the retail banking sector in Germany.

[Table 5]

In line with prior expectations, Panel A of Table 5 documents a positive market revaluation for European bank acquirers and value losses for US bidders in the merger announcement period. Mean abnormal returns to European bidders are a positive and significant 0.36% on the announcement day and a smaller (yet according to the *t*-test still statistically significant) 0.09% and 0.08% over the 3- and 5-day period. While the insignificance of the rank statistic for 3- and 5-day CAR may be due to the fact that non-parametric tests often struggle to detect small levels of abnormal share price performance (Cowan and Sergeant, 1996), a major finding is that, in contrast to US transactions, bidding bank shareholders in Europe do not realize any statistically significant wealth losses as a result of bank M&A. The losses pertaining to US investors range from -1.40% on the announcement day to -0.14% for 26-day CAR (all significant at 1%). Most critically, the last row in Panel A of Table 5 confirms that the abnormal returns of European bank merger announcements are significantly higher than those associated with US acquisitions—a result which is significant for all event window specifications. While the positive CAR for European bidding banks are consistent with the findings of Cybo-Ottone and Murgia (2000), this study is the first to show that bidders in Europe realize higher announcement returns than US institutions using a direct comparison of the value effects of M&A activities in both geographic regions.

To explore the impact of investor protection applicable to targets on bidder wealth directly, Panel B of Table 5 ranks the full sample into ten portfolios based on the magnitude of the 5-day abnormal returns that bidders realize. Consistent with the notion that merger-related gains may easily be bid away in the type of competitive takeover markets prevalent in high protection environments, we observe that acquisitions in the lowest return decile occur in countries where targets enjoy one of the highest levels of investor protection (as measured in terms of both shareholder protection and accounting quality). By the same token, bidder returns are especially pronounced where targets operate in low protection environments. In low protection environments, investors may demand compensation for lower governance standards and a higher risk of expropriation by insiders. Tests of the equality of

means confirm statistically significant differences in both target protection measures between the top, middle and bottom return portfolio.

3.2 Product Diversification and Investor Protection

Recent regulatory changes in the US (above all, the Gramm-Leach-Bliley Act of 1999) repealed boundaries between different types of financial services such as banking and insurance as well as between retail and investment banking (Berger et al., 1999). Legal harmonization within the EU—first in the form of national ‘big bangs’ (e.g. in Britain when commercial banks were permitted to acquire brokerage houses in 1986) and subsequently at EU-level (above all, the Second Banking Directive of 1989 which permitted universal banking throughout Europe)—encouraged financial conglomeration by allowing consolidation across different types of institutions (Allen and Song, 2005).

Previous research findings lead us to make two predictions. First, investors will generally be skeptical about cost efficiencies resulting from product diversifying bank mergers. DeLong (2001), Ramaswamy (1997), and Beitel et al. (2004) find that diversifying bank M&A lead to value losses. It is commonly argued that while diversification may yield gains from cross-selling different financial products (economies of scope), such gains are considerably smaller than the potential cost reductions and efficiency improvements associated with product focusing bank mergers (economies of scale). On the other hand, there are caveats to the negative view of product diversification. Very few studies have incorporated data after the deregulation of product diversifying bank mergers in Europe and the US and the type of large credit institutions that have formed recently may be best suited to reap any merger-related benefits (see Berger and Mester, 1997). Our second prediction is that bidding bank shareholders will be especially wary of product diversifying bank mergers in low protection environments. It is conceivable that bidders find it more difficult to assess the true value of a target and the synergistic benefits of a proposed transaction if the disclosure practices of the target are weak. Additionally, diversification strategies bear an increased risk for bidding shareholders of expropriation by insiders (Morck et al., 1990; Denis et al., 1997). For example, in low protection economies, bidding bank managers may engage in empire-building strategies when committing to value-destroying bank mergers in order to lower both the variance of company returns and their employment risk (Cornett et al., 2003; Anderson et al., 2004).

Following Campa and Hernando (2004) and Doukas and Kan (2006), we classify deals as diversifying if the first two digits of the SIC code of the main industry of the institutions involved in a deal are not identical. Accordingly, a bank (SIC 60_) acquiring a broker (SIC 62_) is regarded as a diversifying

merger, while deals between state banks (SIC 6021) and commercial banks (SIC 6029) are classified as product-focusing.⁵

[Table 6]

Table 6 reports abnormal returns for deals that are focusing and diversifying along product lines. Results are presented for the full sample as well as for the subsets of European and US deals. First, we find that product diversification, generally, attracts negative abnormal returns—the only exceptions are European deals over the 1-, 3- and 5-day event window where the abnormal returns associated with diversifying M&A are positive (significant *t*-statistic, insignificant rank statistic).⁶ However, somewhat unexpectedly, the losses in bidder wealth following the announcement of diversifying mergers are smaller than the losses that result from focusing bank M&A. For the full sample, diversifying mergers lead to mean abnormal returns of -0.03% over the 3-day event window (significant *t*-statistic, insignificant rank statistic) compared with -0.61% for focusing deals (significant at 1%). This finding is consistent with bancassurance and other forms of cross-selling financial products having some performance-enhancing effect—albeit at a small level. We refer to the difference in abnormal returns between diversifying and focusing bank M&A as the ‘value effect’ of product diversification. For the full sample, the magnitude of this effect is 1.14% and 0.57% over the 1- and 3-day event window, respectively (all significant at less than 5%). The effect is even larger for US bidders over the same observation periods (1.45% and 0.61%, significant at 1%). Critically, however, no value effect of product diversification can be found when diversifying M&A are announced in European banking as none of the

⁵While SIC codes do not always accurately reflect the activities of financial firms (see DeLong, 2001), we carefully examined each deal to avoid issues of misclassification. As a robustness check, we used a second measure of diversification that is, arguably, more suitable to account for the nature of some sample banks as integrated financial firms that engage in multiple activities and, hence, have more than one applicable SIC code. We follow Sirower (1997) and examine the number of industry classification codes shared between bidders and targets. We then classify deals as diversifying if bidders and targets do not share any SIC codes. The results when using this measure of diversification are practically identical to the results reported in this section.

⁶Studies such as Berger et al. (1999) and Berger and Mester (1997) suggest that recent changes in regulation and the increasing scale of credit institutions have made product diversification more profitable. In unreported tests, we test whether this holds for our sample. We are unable to find any evidence that the value effect of diversification is more pronounced for M&A valued at more than \$1 billion in either Europe or the US. On the other hand, we cannot reliably test whether product diversification creates bidder value before and after the passing of the Gramm-Leach Bliley Act (GLBA) as these transactions were extremely rare. While US banks could engage in securities activities through so-called ‘section 20’ subsidiaries during the pre-GLBA period of the sample (provided these activities did not exceed 25% of the BHC’s revenue), there were only 6 diversifying deals in the US and 5 such deals in Europe before GLBA was passed.

differences in abnormal returns between diversifying and focusing M&A are statistically significant.

[Table 7]

While the absence of a positive value effect associated with product diversification in Europe is in line with our expectation that investors are more skeptical about diversifying M&A targeted at low protection environments, we examine this argument in more detail. Table 7 presents 5-day CAR by tercile portfolios of the quality of shareholder protection that is prevalent in the target country. Consistent with prior expectations, investors value financial diversification over product focus only in the top protection tercile (i.e. only in the top tercile is the difference in abnormal returns between diversifying and focusing mergers significant at 5%). In lower protection environments, where investors are more likely to be expropriated, there is no value effect associated with product diversification.

3.3 Geographic Diversification and Investor Protection

Table 8 reports abnormal returns to bidding banks for domestic and cross-border deals. Almost half of all sampled merger activity in Europe involves geographic diversification. By contrast, there are no cross-border bids by US banks in the sample.⁷ Whilst the vast majority of cross-border mergers in Europe were aimed at other European institutions and frequently involved banks in closely integrated economic regions (e.g. the Benelux countries, Scandinavia, Germany & Austria), nine of the deals were cross-border mergers targeted at US banks.⁸

We have no a priori expectations about the impact of cross-border M&A on bidder wealth. On the one hand, Cybo-Ottone and Murgia (2000) document for financial firms and Goergen and Renneboog (2004) for non-financial firms that cross-border M&A generate value gains for acquiring

⁷Some researchers have likened inter-state mergers in the US to cross-border M&A (see DeLong, 2001). In unreported tests, we cannot find any differences in the market reaction to inter- and intra-state M&A in the US. It is important to bear in mind, however, that there are legal, regulatory and cultural aspects associated with M&A across country borders—most notably, changes in the investor protection environment applicable to the target—that do not apply to mergers within the US.

⁸The high ratio of cross-border to total M&A activity in the European banking sector reflects the relatively small size of many of those economies (compared with the US) as well as the concentrated ownership levels of banking assets (Berger et al., 1999). The combined asset value accounted for by the five largest banks as a percentage of all banks' assets exceeds 80% in the Netherlands, Sweden and Switzerland (CEPR, 2005), thus, forestalling further domestic consolidation for anti-trust reasons. Also, the introduction of the euro has increased political pressure on banks to form pan-European institutions that can provide corporate banking as well as clearing and settlement services across borders more effectively and, ultimately, at lower cost to consumers (Allen and Song, 2005).

firms in Europe. Alternatively, cross-border bank mergers do not offer the same potential for front- and back office rationalizations as domestic M&A where overlapping branch networks can be trimmed and administrative tasks streamlined in the aftermath of a deal (DeLong, 2001). Further, both the pervasive role of regulation (Kiyimaz, 2004) and outright protectionism by some European governments (Allen and Song, 2005; Campa and Hernando, 2004) may cause cross-border bank M&A to attract a negative market reaction.

Table 8 presents evidence of relatively positive market revaluation effects following the announcement of cross-border bank M&A in Europe. Over the duration of the 1-, 3-, and 5-day event window, cross-border bids create shareholder value. More specifically, European cross-border deals attract a positive market revaluation of 0.55% on the announcement day (significant at 1% [t -test] and 5% [rank test]). The investor reaction to geographically focusing deals is less pronounced, but still a positive 0.21% (significant t -statistic, insignificant rank statistic). These findings are replicated for 3- and 5-day CAR, but not for any broader event window specifications.⁹

However, an important aspect about cross-border mergers is that they tend to be ‘cross-regime’ mergers. Next to a transfer of legal ownership, cross-border mergers usually also entail a transfer of the corporate governance regime that is relevant to the target when the bidder’s accounting and general disclosure laws are adopted by the acquired firm in the post-merger period (Bris and Cabolis, 2004). We, thus, expect the market reaction to cross-border M&A to be influenced by differences in the quality of investor protection regimes between bidders and targets. Starks and Wei (2004) observe that bidders pay a lower control premium for acquisition targets domiciled in investor protection regimes that are less sophisticated than that of the bidder. For our sample, we posit that if acquisitions are made in the context of protection regimes which are less sophisticated than that of the bidding bank, bidders will realize higher announcement period returns. This is because bidding shareholders have to be compensated for acquisitions in environments with less efficient internal and external control mechanisms.

[Table 8]

We test directly the argument that differences in investor protection between merging banks have market valuation effects in cross-border M&A. Table 8 divides cross-border deals into two groups. The

⁹In unreported tests, we also find that cross-border mergers within Europe ($n=15$) attract higher announcement returns than cross-border mergers between European and US banks ($n=9$). For 5-day CAR, mergers with US targets lead to bidder returns of -0.05% and bidders with targets in Europe to 0.28%. However, difference in announcement returns between the two groups are not statistically significant.

first group ($n=11$) contains acquisitions where the shareholder protection prevalent in the bidder's country is greater than that in the target country. The contrary is true for the control group ($n=13$), either because targets operate within a relatively more sophisticated regime or the transaction is not a 'cross-regime' merger. To assess whether cross-border mergers lead to a change in the target's effective protection regime, we adjust for bidders with cross-listings in different investor protection environments. If bidders have multiple listings, the highest protection environment in which the acquirer's shares are traded is the effective level of protection enjoyed by bidding bank shareholders.¹⁰

We find that, with the exception of 26-day CAR, abnormal returns associated with M&A in lower protection environments $[(+)]$ are consistently higher than in high protection environments $(-)$. On the announcement date, cross-border bids targeted at banks operating in lower protection regimes realize abnormal returns of 1.34%, while cross-border bids where targets operate under a relatively more sophisticated protection regime attract -0.28%. The difference in announcement returns is statistically different (at 5%-level) on the announcement day as well as for longer event window specifications. Consistent with prior expectations, this suggests that cross-border bank mergers create value only if deals are targeted at environments that offer less investor protection (i.e. 'cross-regime' M&A with targets in less advanced protection systems). Accordingly, bidding bank shareholders are compensated for acquiring equity in an environment where the private benefits of control are higher than in their own environment. No such gains exist if bidders target a higher protection regime, as bidding bank shareholders will not demand compensation for a higher risk of expropriation if the transparency practices by targets are more advanced in this type of environment

3.4 Takeover Finance and Investor Protection

In Table 9 we present evidence on how the mode of takeover finance (cash, equity, or a mixture of both) impacts upon merger announcement returns. As a percentage of total transactions, Europe has a substantially higher share of cash-financed takeovers (49%), compared with the US (19%). By the same token, the share of purely equity-financed deals is much smaller in Europe (34%) than in the US (68%). This is consistent with Rossi and Volpin (2004) who observe for a sample of cross-border mergers that there is a preference for all-cash bids in countries with less sophisticated rights for minority shareholders. Against the background of an increased risk of expropriation for minority shareholders

¹⁰For example, Germany's Deutsche Bank is listed on the NYSE and, thus, complies with US disclosure rules. If Deutsche acquires an institution in the US, this transaction is, strictly speaking, not 'cross-regime'. Only direct listings and, in the US, Level II and Level III ADR issues which subject bidders to stricter SEC disclosure rules qualify as cross-listings (see Bris and Cabolis, 2004).

under a low protection regime, target shareholders are less likely to accept the bidder's equity as a transaction currency outside the US or the UK.

[Table 9]

The use of equity as acquisition currency is believed to signal to investors that the bidder's equity is overvalued and the proposed transaction, hence, less desirable at the financial terms offered (Becher, 2000; Anderson et al., 2004). We expect that cash-financed deals receive a more positive market reaction than other forms of takeover finance and that any value premium associated with cash over other forms of acquisition finance is larger in low protection regimes. The results in Table 9 show that abnormal returns associated with all-cash bids are positive and statistically significant in Europe (Panel A.1) and negative and significant in the US (Panel B.1). More fundamentally, however, the results are broadly consistent with cash finance generating higher abnormal returns than non-cash finance in both Europe and the US. On $t=0$, the difference in mean abnormal returns associated with cash- and non-cash finance deals is 1.90% in Europe and 1.38% in the US (statistically significant at the 7%- and 1%-level, respectively). While differences in the market reaction to all-cash and non-cash finance are not statistically significant over longer examination periods, the positive value effect of cash finance tends to be more pronounced in Europe than in the US over most event windows.

Next, we examine whether investor preference for cash-finance varies with the value of the proposed bank merger. We define relative bid size as the ratio of deal value to the market value of the bidder's equity in the fiscal year before the merger announcement. Even though abnormal returns are statistically indistinguishable from zero and based on very small sample sizes for most subsamples, the positive value effect of cash-finance is among the strongest when European acquirers undertake low relative value M&A (Panel A.3). Consequently, the value premium investors attach to cash finance appears to be more pronounced when European acquirers with high market valuations initiate M&A deals of low relative value. Moeller et al.(2004) proffer evidence that high-value bidding firms realize lower announcement returns than firms with lower market valuations and suggest that investors view the management of high valuation firms—because they are less likely to be subjected to a hostile takeover bid—as more entrenched.

4 Regression Analysis:

Bank Merger Returns and Investor Protection

We use cross-sectional regression analysis in this section to examine further the impact of the target's investor protection regime on the market reaction to bank merger announcements. In the preceding sections, univariate tests have demonstrated that bank bids targeted at low protection economies (Europe) elicit a more positive market revaluation than bank M&A aimed at high protection environments (the US). Also, we found a positive market revaluation associated with product diversification in the US and with cash-finance in Europe. The explanation we put forward for these findings—a negative impact of target protection laws on bidder returns—is further strengthened by the regression results in this section. Further, we analyze the effects of various acquirer and deal characteristics on bidder abnormal returns. The specification of our model is as follows:

$$\begin{aligned} CAR_{(t-2;t+2)} = & \alpha + \beta_1 \text{Investor Protection} + \beta_2 \text{TargetEPS} + \beta_3 \text{ProductFocus} + \beta_4 \text{Rel.ROE} \\ & + \beta_5 \text{CashDummy} + \beta_6 \text{DealValue} + \beta_7 \text{Crossborder} + \beta_8 \text{NonInt.Inc.} \\ & + \beta_9 \text{Acq.TotalCost} + \beta_{10} \text{Acq.ROE} + \beta_{11} \text{Merger Program} + \varepsilon \end{aligned} \quad (5)$$

The dependent variable is the estimated 5-day cumulative abnormal performance of acquiring banks around the announcement date of a merger. As indicated above, we proxy the level of investor protection that applies to targets by two indexes taken from La Porta et al. (1998). An index of anti-director rights that captures the various rights that shareholders possess against management and a second index that measures the quality of national accounting standards. The control variables in (5) are from Worldscope and include pre-merger earnings per share (EPS) of the target and relative ROE which is the ROE of the target divided by the ROE of the acquirer (all in $t-1$). Other variables are deal value (measured as the logarithm of the dollar value of the M&A transaction), a cross-border dummy (takes the value of 1 for acquisitions where target and acquirers are located in different countries and 0 otherwise), and product diversification (measured by a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the companies in a merger are identical and 0 otherwise). The cash-only dummy is 1 if a merger is financed by 100% cash rather than by a mix of cash and equity (in which case the variable is 0). Total cost are expressed on a per-employee basis and non-interest income is measured as the share of non-interest income to the total of non-interest and interest income (both in $t-1$). The latter ratio indicates the significance of fee-generating activities versus more traditional loan activities for a bank.

[Table 10]

Table 10 presents different specifications of our regression model. In Column 1, we exclude the investor protection measures and estimate the coefficients on various control variables instead. The results show that bids made by profitable banks (i.e. with a high return on equity) and takeovers targeted at relatively more profitable banks (as reflected by a high relative ROE) are associated with higher announcement returns. Further, consistent with the findings of the univariate analysis, there is a positive and significant association between abnormal returns and cross-border acquisitions, on the one hand, and all-cash bids, on the other.

The results in Columns 2 of Table 10 present evidence that shareholder protection has a negative and statistically significant impact (at less than 1%) on bidder returns during the announcement period. Consequently, the better shareholders are protected from expropriation by managers, the lower the abnormal returns associated with bank M&A. We would, thus, expect abnormal returns to be lower where targets operate under a high investor protection regime (such as the US) compared with countries where higher information asymmetry and agency costs lead to a less competitive market for corporate control (many European economies). In the latter, bidders will find it easier to extract economic gains from their targets.

Further, the results in Column 2 indicate a negative association between bidder returns and the product focus of the proposed transaction as well as between bidder returns and target earnings per share (significant at the 5% level). The former result confirms the market confidence in diversifying bank mergers as demonstrated by our univariate tests, while the latter result suggests that underperforming targets offer opportunities for bidders to create value.

Next, we use a second index of investor protection as a robustness test. We replace shareholder protection as a proxy for the level of investor protection in Columns 4 and 5 of Table 10 with an index of the quality of accounting standards applying to target banks. Our results are in line with the findings above. Lower levels of target protection are associated with higher bidder returns. Again, product diversification is associated with higher returns in Column 4, but the coefficient loses its significance in Column 5 when further control variables are added. The results of this regression confirm that, next to investor protection, relatively more profitable targets and all-cash bids translate into higher market expectations at the time of the bank merger announcement. Interestingly, the value of the announced deals has no effect on abnormal returns for any of the specifications. While deal size is somewhat a proxy for the degree of market power which newly-formed institutions are likely to enjoy, banks in our sample do not seem to benefit from this possibly because our sampling criterion of deals no smaller than

\$100 million has left us with a sample of large and very large institutions where the scope for significant economies of scale may be limited.

4.1 Robustness

Prior to our analysis, we verified the accuracy of the event dates supplied by Thomson Financial. Following Moeller and Schlingemann (2005), we analyzed changes in the trading volumes of the acquirer on the announcement date. If market-adjusted volumes increase significantly on $t=0$, this is interpreted as evidence of an accurately reported announcement date. In total, four deals have been omitted from the sample using this technique. Next, we used different event window lengths (3-day, 11-day CAR) for the multivariate analysis. Our main results do not change; our conclusions are, thus, not contingent on the use of a particular event window specification.

We also examined the sensitivity of the coefficient on shareholder protection for cash *versus* non-cash finance. It is conceivable that our main result—the negative impact of investor protection laws on abnormal bidder returns—is in fact driven by the negative impact of non-cash finance (which is more prevalent under high protection regimes) on abnormal returns. We control for this by running the regressions in Columns 2 - 5 in Table 10 for subsamples of cash and non-cash deals. We obtain broadly similar results with the statistical significance of the investor protection variable remaining at or below 5% for all specifications.

Next, we classified all bank acquisitions valued at more than \$1 billion as mega-mergers and compared the resulting mean abnormal returns with those of the rest of the sample. We are indeed unable to detect any differences in CAR for different deal values. This runs contrary to the view that mega-mergers—because they create banks that are ‘too-big-to-fail’ (TBTF) and, thus, entrench management and encourage post-merger risk taking—should lower the expected gains from M&A. The lack of an observable impact of mega-mergers on announcement returns can be interpreted as either suggesting that mergers valued at \$1 billion are not large enough to cause TBTF concerns or that some bidders might have crossed the critical asset threshold for TBTF considerations to become effective before the focal acquisition.

Due to the dominance of US transactions in our sample, we verify that the negative relationship between both target protection measures and bidder abnormal returns, as identified for the entire sample in Section 2.2, also exists in a non-US context. We rank bidder performance of European deals by return quintiles and find shareholder protection for targets in the lowest quintile to be significantly higher (at 1%) than in the highest return portfolios.

Serial acquisitions form a sizable share of M&A activities in the banking industry. For transactions that are part of a merger program, the bidder’s market valuation may partly reflect investor anticipation of future bidding activity before any announcements are made. This anticipation effect may potentially depress the announcement returns that serial acquirers earn vis-à-vis first-time bidders (see Song and Walkling, 2006). To account for this, a binary variable (zero for first bids and one for second or higher order bids) is added to the multivariate regressions. The merger program dummy does not enter the regressions at customary significance levels indicating the absence of anticipation effects on bank merger announcement returns.

While the multivariate regressions demonstrate that shareholder protection and accounting quality have comparable effects in the market for corporate control, the indices still measure somewhat different institutional characteristics. In Section 2.2, we have identified deals—mostly targeted at civil law-based countries like Switzerland and Germany that combine strong accounting regulations with a relatively weak form of investor protection—where the two measures point to different conclusions. We examine whether the market reaction to M&A differs in cases where the two measures do not reach a conclusive assessment of the level of investor protection that is prevalent in the target country by using interaction terms between a binary variable that takes the value of 1 if there is a discrepancy between the two measures and target eps, deal value, and acquirer cost. None of the interaction terms enter our regressions at customary significance levels. Consequently, there is no evidence of a modified investor reaction to bank merger announcement targeted at countries where the level of investor protection is relatively ambiguous.

5 Concluding Remarks

Our analysis indicates that the level of investor protection enjoyed by shareholders in the target country partly determines market expectations about merger-related performance gains at the time of large bank merger announcements. The results suggest that the positive bidder returns in European economies reflect an optimistic market assessment of the acquirer’s ability to extract economic gains from targets in a low investor protection environment. By contrast, high investor protection regimes—characterized by market-based governance, a less pronounced manager-shareholder conflict and a much more competitive market for corporate control—make it more difficult for bidders to realize gains following an acquisition.

Two main implications arise from our findings. First, the negative market assessment of bank merger activity targeted at high investor protection economies (such as the US & UK) raises questions

about the efficiency of internal governance mechanisms. If bank mergers, on average, are to the detriment of shareholders, why are they unable to prevent them? Future studies may find it beneficial to examine explanations for this paradox by concentrating on bank-specific forms of investor protection rather than on regulatory regimes at the country-level. So far, research on the governance of banking firms and its value implications for M&A activities has only been able to identify executive compensation as a facilitator of value creating bank mergers (see Cornett et al., 2003; Hagendorff et al., 2007), leaving the role of other important governance mechanisms, such as ownership structure and board composition, largely unexplored.

Second, the positive value effects of European bank merger announcements are at odds with some regulatory practices in the EU which prevent the consolidation of national banking sectors.¹¹ The positive market reaction to European cross-border mergers, in particular, shows that there are gains to be reaped from the consolidation of banking assets. However, partly as a result of an openly hostile environment to cross-border bank M&A in many European countries, few banks have established retail networks across the EU. This is an important issue because it is widely believed consumers would benefit from the creation of a pan-European clearing and settlement system through substantially reduced fees for cross-border transactions.

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¹¹For example, German law bars mergers between private sector and public sector banks and complex voting rights in Italy prevent the demutualization and consolidation of the sizable mutual sector (*branche popolari*).

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Table 1 Overview of M&A Sample

The table breaks down 204 bank M&A deals in the period 1996–2004 by transaction year and the bidder's country of origin. Deal values are measured in constant 2004 \$ using the US CPI. Only majority acquisitions between publicly listed banks (as acquirers) and financial services firms (as targets) are included. Bidders and acquisition targets are from the US and Europe (EU-15 plus Switzerland). The value of the acquired equity is at least \$ 100 million in constant 2004 \$ and all mergers were completed by May 2005.

Panel A: Distribution of Acquisitions by Year

Year	No. of Mergers			Total Value (mil \$)			Ave Value (mil \$)		
	Total	US	Europe	Total	US	Europe	Total	US	Europe
1996	11	9 (82%)	2 (18%)	10,317	4,825 (47%)	5,491 (53%)	938	536	2,746
1997	30	24 (80%)	6 (20%)	80,988	33,791 (42%)	47,198 (58%)	2,700	1,408	7,866
1998	32	28 (88%)	4 (12%)	258,122	237,615 (92%)	20,507 (8%)	8,066	8,486	5,127
1999	27	18 (67%)	9 (33%)	96,377	25,012 (26%)	71,365 (74%)	3,570	1,390	7,929
2000	29	14 (48%)	15 (52%)	83,818	38,156 (46%)	45,662 (54%)	2,890	2,725	3,044
2001	28	19 (68%)	9 (32%)	52,048	11,380 (22%)	40,668 (78%)	1,859	599	4,519
2002	14	11 (79%)	3 (21%)	26,545	9,952 (37%)	16,593 (63%)	1,896	905	5,531
2003	17	14 (82%)	3 (18%)	57,330	55,852 (97%)	1,477 (3%)	3,372	3,989	492
2004	16	14 (88%)	2 (13%)	93,899	78,001 (83%)	15,898 (17%)	5,869	5,572	7,949
All	204	151 (74%)	53 (26%)	759,444	494,585 (65%)	264,859 (35%)	3,723	3,275	4,997

Panel B: Distribution of Acquisitions by Country

Acquirer Nation	Target Nation													Total
	BE	DE	FR	GE	GR	IR	IT	NL	PO	SP	SW	UK	US	
Belgium	2							3					1	6
Denmark		2												2
France	1		2	1	1								1	6
Germany				1									1	2
Greece					7									7
Italy							5						1	6
Netherlands	1			1									3	5
Portugal									2					2
Spain									1	2		1		4
Sweden		1												1
Switzerland											2		1	3
UK			1			2						5	1	9
US													151	151
Total	4	3	3	3	8	2	5	3	3	2	2	6	160	204

Source: Thomson Financial, Bureau of Labor Statistics (<http://stats.bls.gov>).

Table 2 Investor Protection

Investor protection is proxied by two indexes from La Porta et al (1998). Anti-director rights vary between 0 and 6 depending on the inclusion of six different voting rights as detailed below. This index is multiplied by an index of the rule of law (varying between 0 and 10) and called shareholder protection. Accounting standards vary from 0 to 90 depending on the inclusion of 90 accounting items in national accounting standards

Panel A: Index Composition	
Anti-director rights	(1) What is the percentage of share capital required to call in an extraordinary shareholders' meeting? (2) Are proxy votes permissible or do shareholder have to be present (either personally or through an authorized representative) at shareholders' meetings? (3) Are there restrictions on selling shares around the time of meetings? (4) Is cumulative voting for directors permissible? Alternatively, are there other mechanisms in place by which minority interests name a proportional number of directors? (5) Do minority shareholders have legal mechanisms to fight perceived oppression? For example, can they insist on their shares being repurchased should they object key decisions taken by management? (6) Do shareholders have preemptive rights to new issues that protect their stake from dilution?
rule of law	Assessment of the law and order tradition in the country produced by the rating agency International Country Risk and quoted by La Porta et al. (1998). Varies between 0 and 10 where lower scores indicate a lower tradition for law and order.
accounting standards	Index constructed from company reports in different countries. Reports are examined and rated according to their inclusion or omission of 90 items. These items fall into seven categories (general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items).

Panel B: Country Scores

Country	Shareholder Protection (0-60)	Accounting Standards (0-90)
Belgium	0	61
Denmark	20	62
France	28.95	69
Germany	9.23	62
Greece	14.24	55
Ireland	31.2	n.a.
Italy	6.75	62
Netherlands	40	64
Portugal	26.04	36
Spain	31.2	64
Sweden	30	83
Switzerland	20	68
United Kingdom	42.85	78
United States	50	75

Table 3 Interaction between Shareholder Protection and Accounting Quality

Investor protection is proxied by two indexes from La Porta et al (1998) and multiplied by an index of the rule of law. Accounting standards vary from 0 to 90 depending on the inclusion of 90 accounting items in national accounting standards

		Shareholder Protection		
		Below median	Above median	Total
Accounting Quality	Below median	36	0	36
	Above median	8	160	168
Total		44	160	204

Pearson $\chi^2 = 158.96$ ($p = 0.00$)

Table 4 Bidder Abnormal Returns

The sample consists of 204 US and European bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against national Datastream banks-only indexes using market model regressions that are averaged over each event window. Tests of statistical significance are based on standardized prediction errors, adjusted for increases in the daily return variance following merger announcements (Boehmer et al., 1991) and a non-parametric rank test (Corrado, 1989).

Event window	Ave CAR	Pos.	Neg.	t-Test	Rank test
(<i>t</i> -20; <i>t</i> +5)	-0.12%	66	138	-0.54	-3.42***
(<i>t</i> -10; <i>t</i> +1)	-0.18%	69	135	-1.66*	-2.99***
(<i>t</i> -2; <i>t</i> +2)	-0.32%	66	138	-5.67***	-3.75***
(<i>t</i> -1; <i>t</i> +1)	-0.50%	63	141	-13.55***	-4.61***
0	-0.93%	74	130	-53.45***	-5.61***

* (**, ***) denotes significance at the 10% (5%, 1%) level.

Table 5 Abnormal Returns by Region and Investor Protection Levels

The sample consists of 204 US and European bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against the Datastream bank sector index using market model regressions. Abnormal returns are averaged over each event window. Tests of statistical significance are based on standardized prediction errors, adjusted for increases in the daily return variance following merger announcements (Boehmer et al., 1991) and a non-parametric rank test (Corrado, 1989).

Panel A: Abnormal Returns for European and US Bank Acquirers						
		(<i>t</i> -20; <i>t</i> +5)	(<i>t</i> -10; <i>t</i> +1)	(<i>t</i> -2; <i>t</i> +2)	(<i>t</i> -1; <i>t</i> +1)	0
EUR mergers <i>n</i> =53	ave CAR	-0.03%	0.03%	0.08%	0.09%	0.36%
	<i>t</i> -stat	-0.21	0.85	3.12***	6.15***	40.67***
	rank stat	-1.43	0.37	0.91	0.70	2.06**
US mergers <i>n</i> =151	ave CAR	-0.14%	-0.25%	-0.47%	-0.70%	-1.40%
	<i>t</i> -stat	-0.83	-2.82***	-10.17**	-24.09***	-98.18**
	rank stat	-2.85***	-3.04**	-3.95**	-4.72**	-6.96**
Mean Diff		0.12%**	0.28%***	0.54%***	0.80%***	1.76%***
$\Delta(\text{CAR})_{\text{EUR-US}}$		(<i>p</i> = 0.03)	(<i>p</i> = 0.00)	(<i>p</i> =0.00)	(<i>p</i> =0.00)	(<i>p</i> =0.00)
Panel B: Target Investor Protection Measures by Deciles, ranked by CAR _(<i>t</i>-2; <i>t</i>+2)						
D _{<i>i</i>}	ave CAR	<i>n</i>	Shareholder Protection	Accounting Quality		
D ₁ (low)	-2.22%	21	47.68	75.14		
D ₂	-1.15%	20	47.00	73.65		
D ₃	-0.73%	21	47.16	73.75		
D ₄	-0.45%	20	46.01	72.05		
D ₅	-0.32%	20	45.50	71.15		
D ₆	-0.18%	21	42.38	72.6		
D ₇	-0.04%	20	43.97	70.3		
D ₈	0.20%	21	38.23	69.75		
D ₉	0.47%	20	39.51	69.38		
D ₁₀ (high)	1.31%	20	30.38	67.85		
Differences in Investor Protection						
D ₁ -D ₁₀			17.30***	7.29***		
D ₁ -D ₅			2.18*	3.99**		
D ₅ -D ₁₀			15.12***	3.30**		

* (**, ***) denotes significance at the 10% (5%, 1%) level. Paired *t*-tests are used to determine differences in mean returns and assume unequal variances.

Table 6 Abnormal Returns for Product-Focusing and Diversifying Mergers

The sample consists of 204 US and European bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against national Datastream bank-sector indexes using market model regressions. Abnormal returns are averaged over each event window. Tests of statistical significance are based on standardized prediction errors, adjusted for increases in the daily return variance following merger announcements (Boehmer et al., 1991), and a non-parametric rank test (Corrado, 1989). Acquirers are commercial banks, bank holding companies, credit institutions, and savings banks. Targets are also insurance companies (life and non-life), mortgage bankers, as well as security brokers and flotation companies. Product-focusing mergers involve banks where the first two digits of the four-digit SIC code of their main product line are identical.

	Full Sample (n=204)			US (n=151)			Europe (n=53)		
	Focusing	Diversifying	$\Delta(\text{CAR})$	Focusing	Diversifying	$\Delta(\text{CAR})$	Focusing	Diversifying	$\Delta(\text{CAR})$
n	164	40		130	21		34	19	
(t-20; t+5)	-0.12% (-0.5860)*** [-2.7936]	-0.10% (-1.434) [-2.2154]**	0.02% p=0.76	-0.15% (-0.8758) [-2.3654]	-0.11% (-2.6059)*** [-2.4769]**	0.04% p=0.59	0.01% (0.1640) [-1.2943]	-0.09% (-1.4482) [-0.4929]	-0.10% p=0.26
(t-10; t+1)	-0.20% (-2.0656)** [-2.9017]	-0.08% (-1.961) [-0.8463]	0.13% p=0.11	-0.27% (-3.1936)*** [-2.7772]	-0.15% (-5.2912)*** [-1.8616]	0.12% p=0.29	0.04% (1.6500) [-0.2257]	0.01% (-0.0127) [0.7459]	-0.03% p=0.85
(t-2; t+2)	-0.39% (-7.7265)*** [-3.8025]	-0.04% (-2.161) [-0.5211]	0.35% p=0.03**	-0.50% (-12.172)*** [-3.7528]	-0.20% (-10.217)*** [-1.8484]	0.31% p=0.10*	0.05% (4.4986)*** [0.0305]	0.14% (4.1068)*** [1.1834]	0.09% p=0.79
(t-1; t+1)	-0.61% (-18.868)*** [-4.8561]	-0.03% (-3.716) [-0.1238]	0.57% p=0.01***	-0.79% (-29.468)*** [-4.7432]	-0.17% (-16.090)*** [-1.3040]	0.61% p=0.02**	0.08% (10.413)*** [-0.1804]	0.12% (5.2516)*** [1.1359]	0.09% p=0.93
0	-1.16% (-70.450)*** [-5.8409]	-0.03% (-29.07) [-0.5246]	1.14% p=0.04**	-1.60% (-124.09)*** [-6.0600]	-0.15% (-21.54) [-1.9766]	1.45% p=0.09*	0.50% (97.811)*** [1.3340]	0.11% (-65.609)*** [1.2966]	-0.39% p=0.68

* (**, ***) denotes significance at the 10% (5%, 1%) level. Paired *t*-tests are used to determine differences in means and assume variances. *t*-Statistics are in parentheses (...) and rank statistics in square brackets [...].

Table 7 The Diversification Effect by Shareholder Protection Quality, CAR_(t-2; t+2)

Five-day abnormal returns (market model) are presented for three portfolios depending on the quality of shareholder protection (La Porta et al., 1998). Shareholder protection applies to targets and is based on an index of anti-director rights (varying between 0 and 6) multiplied by an index of the rule of law (varying between 0 and 10). Product-focusing mergers involve banks where the first two digits of the four-digit SIC code of their main product line are identical. Paired *t*-tests are used to determine differences in means and assume unequal variances.

	Low Protection (0 – 20)			Medium Protection (21 – 40)			High Protection (41 – 60)		
	Focusing	Diversifying	$\Delta(\text{CAR})$	Focusing	Diversifying	$\Delta(\text{CAR})$	Focusing	Diversifying	$\Delta(\text{CAR})$
n	16	9		9	4		139	27	
Ave CAR	0.31%	0.13%	-0.18%	-0.24%	-0.10%	0.14%	-0.48%	-0.08%	0.40%**
t-Test	26.51***	0.21	p=0.81	-24.88***	-10.33***	p=0.59	-11.12***	-2.90***	p=0.02
Rank test	2.21**	0.48		-0.25	-0.32		-3.89***	-0.73	

* (**, ***) denotes significance at the 10% (5%, 1%) level.

Table 8 Abnormal Returns of Domestic and Cross-border Bank Mergers

The sample consists of 204 US and European bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against national Datastream bank-sector indexes using market model regressions. Abnormal returns are averaged over each event window. There are no cross-border mergers by US acquirers. Tests of statistical significance are based on standardized prediction errors, adjusted for increases in the daily return variance following merger announcements (Boehmer et al., 1991) and non-parametric rank tests (Corrado, 1989). A merger is classified as domestic if both banks are chartered in the same country and cross-border if the acquirer and the target are based in different countries. (+) [(-)] indicates cross-border mergers where bidders have higher (lower) shareholder protection values than targets.

	Europe				US				Cross-border CAR: Target in Lower Protection Regime?			$\Delta(\text{CAR})$ EUR _d -EUR _{cb}
	domestic		cross-border		domestic		cross-border					
	Ave CAR	t-test rank test	Ave CAR	t-test rank test	Ave CAR	t-test rank test	Ave CAR	t-test rank test	(+)	(-)	$\Delta(\text{CAR})$ CAR(+)-CAR(-)	
<i>n</i>	29		24		151		0		11	13		
(<i>t</i> -20; <i>t</i> +5)	-0.04%	0.0880 -1.2960	-0.02%	-1.42986	-0.14%	-0.8283 -2.8538***	—	—	0.01%	-0.02%	0.02% (<i>p</i> =0.68)	-0.04% (<i>p</i> =0.81)
(<i>t</i> -10; <i>t</i> +1)	0.03%	1.6677 0.0895	0.02%	0.5509 0.4060	-0.25%	-2.8205*** -3.036***	—	—	0.10%	-0.01%	0.17%* (<i>p</i> =0.07)	0.01% (<i>p</i> =0.7662)
(<i>t</i> -2; <i>t</i> +2)	0.08%	3.1734*** 0.3430	0.08%	6.2230*** 0.8441	-0.47%	-10.169*** -3.9482***	—	—	0.35%	-0.25%	0.60%*** (<i>p</i> =0.01)	0.01% (<i>p</i> =0.97)
(<i>t</i> -1; <i>t</i> +1)	0.07%	8.6403*** 0.2793	0.12%	8.8564*** 0.6309	-0.70%	-24.0877*** -4.7168***	—	—	0.42%	-0.23%	0.66%** (<i>p</i> =0.04)	-0.05% (<i>p</i> =0.90)
0	0.21%	56.7957** 0.6633	0.55%	58.0037*** 0.005**	-1.40%	-98.1771*** -6.0955***	—	—	1.34%	-0.28%	1.62%** (<i>p</i> =0.05)	-0.33% (<i>p</i> =0.73)

(**, ***) denotes significance at the 10% (5%, 1%) level. Paired *t*-tests are used to determine differences in means assuming unequal variances.

Table 9 Method of Payment and Announcement Returns

The sample consists of 204 US and European bank acquirers between 1996 and 2004. All banks are publicly traded. Abnormal returns are calculated against Datastream bank sector indexes using market model regressions. Abnormal returns are averaged over each event window. Tests of statistical significance are based on standardized prediction errors, adjusted for increases in the daily return variance following merger announcements (Boehmer et al., 1991), and a non-parametric rank test (Corrado, 1989). Transactions that were completely paid for in cash are classified as all-cash bids with the remaining deals (equity, mixed finance) classified as 'not all-cash'. Relative bid size is the deal value divided by the bidder's market capitalization at the end of the fiscal year prior to the merger announcement. Bid sizes above and below the sample mean are examined separately.

		(<i>t</i> -20; <i>t</i> +5)	(<i>t</i> -10; <i>t</i> +1)	(<i>t</i> -2; <i>t</i> +2)	(<i>t</i> -1; <i>t</i> +1)	0
Panel A : European M&A						
A.1 All European Deals						
all-cash (<i>n</i> =26)		0.06%	0.03% ^{**}	0.32% ^{***}	0.42% ^{***/†}	1.33% ^{***/†}
not all-cash (<i>n</i> =27)		-0.11%	0.02%	-0.15% ^{***}	-0.22% ^{***}	-0.57%
	$\Delta(\text{CAR})_{c-n}$	0.18% [*]	0.00%	0.47%	0.64%	1.90% [*]
A.2 Rel. bid size>mean						
all-cash (<i>n</i> =6)		0.34%	0.18%	0.81% [†]	0.91%	2.32%
not all-cash (<i>n</i> =21)		-0.12%	0.05%	-0.16%	-0.22%	-0.22%
	$\Delta(\text{CAR})_{c-n}$	0.46%	0.13%	0.97%	1.13%	2.54%
A.3 Rel. bid size<mean						
all-cash (<i>n</i> =20)		-0.02%	-0.02%	0.17%	0.27%	1.04%
not all-cash (<i>n</i> =6)		-0.09%	-0.06%	-0.12%	-0.22%	-1.79%
	$\Delta(\text{CAR})_{c-n}$	0.07%	0.04%	0.29% [*]	0.49% ^{**}	2.83% ^{**}
Panel B: US M&A						
B.1 All US Deals						
all-cash (<i>n</i> =19)		-0.15% ^{**}	-0.29% ^{***}	-0.27% ^{***}	-0.37% ^{***}	-0.19% ^{***}
not all-cash (<i>n</i> =132)		-0.15% ^{***}	-0.25% ^{***/†}	-0.49% ^{***/†}	-0.75% ^{***/†}	-1.57% ^{***/†}
	$\Delta(\text{CAR})_{c-n}$	-0.01%	-0.04%	0.21%	0.38% ^{**}	1.38% ^{***}
B.2 Rel. bid size>mean						
all-cash (<i>n</i> =4)		-0.01%	-0.57%	-0.09%	0.04%	0.70%
not all-cash (<i>n</i> =57)		-0.15% ^{**}	-0.24% ^{***}	-0.46% ^{***/†}	-0.76% ^{***/†}	-1.70%
	$\Delta(\text{CAR})_{c-n}$	0.15%	-0.34%	0.37%	0.80%	2.40%
B.3 Rel. bid size<mean						
all-cash (<i>n</i> =15)		-0.19%	-0.21%	-0.32%	-0.48% ^{**}	-0.43%
not all-cash (<i>n</i> =75)		-0.14% ^{***/†}	-0.25% ^{***/†}	-0.50% ^{***/†}	-0.74% ^{***/†}	-1.47% ^{***/†}
	$\Delta(\text{CAR})_{c-n}$	-0.05%	0.04%	0.18%	0.26%	1.05% [*]

(^{**}, ^{***}) denotes significance at the 10% (5%, 1%) level based on *t*-tests (assuming unequal variances) and [†] denotes significance of at least 5% according to a rank test.

Table 10 Regressions: Abnormal Returns and Investor Protection

The table reports least squares regressions of the effect of investor protection and control variables on bidders' 5-day cumulative abnormal returns in percentage points. The sample consists of 204 commercial banks in the US and Europe (EU-15 plus Switzerland) that announced majority acquisitions in the period 1996 – 2004. Abnormal returns are calculated against national Datastream bank sector indexes and averaged over $(t-2;t+2)$ days surrounding the announcement date. The 5-day CAR are regressed against investor protection proxies in the target country and a vector of controlling variables. Shareholder protection is an index of anti-director rights multiplied by an index of the quality of law enforcement (both from La Porta et al., 1998) and accounting standards capture the quality of local disclosure practices of accounting information (also from La Porta et al., 1998). The control variables are from the Worldscope database. They include earnings per share of the target (EPS), return on equity (ROE); relative ROE is the ROE of the target divided by the ROE of the acquirer (all in $t-1$). Deal values are the logarithm of the dollar value of the M&A transaction; cross-border is a dummy variable that takes the value of 1 for acquisitions where target and acquirers are located in different countries; product focus is measured by a binary variable that takes the value of 1 if the first two digits of the four-digit SIC code of the companies in a merger are identical and 0 otherwise. The cash-only dummy is 1 if a transaction is 100% cash-financed and 0 otherwise. Total costs are expressed on a per-employee basis and non-interest income is measured as the share of non-interest income to the total of non-interest and interest income (in $t-1$).

	(1)	(2)	(3)	(4)	(5)
Shareholder Protection		-0.168*** (0.057)	-0.202*** (0.071)		
Accounting Standards				-0.025** (0.011)	-0.031** (0.015)
Target EPS $t-1$	-0.104* (0.06)	-0.033** (0.016)	-0.160** (0.066)	-0.027* (0.016)	-0.087 (0.064)
Product Focus	-0.189 (0.263)	-0.328* (0.192)	-0.268 (0.314)	-0.394** (0.195)	-0.436 (0.32)
Rel. ROE	0.911*** (0.309)		0.733** (0.361)		0.783** (0.37)
Cash-only dummy	0.603** (0.263)		0.468 (0.307)		0.773*** (0.279)
Deal value	-0.039 (0.078)		0.043 (0.088)		
Cross-border dummy	0.706** (0.345)		1.206*** (0.451)		
Non-interest income $t-1$	-0.12e-7* (0.07e-7)		-0.3e-7*** (0.1e-7)		-0.1e-7 (0.1e-7)
Acquirer total cost $t-1$			0.158 (0.256)		-0.035 (0.253)
Acquirer ROE $t-1$	5.819*** (1.911)				
Constant	-1.595** (0.657)	0.748** (0.298)	0.141 (0.782)	1.830** (0.79)	1.816 (1.479)
Observations	192	194	187	194	192
R-squared	19.70	7.00	24.60	5.40	15.80

Standard errors are heteroskedasticity-robust and reported in parentheses.

Significant at 10%; ** significant at 5%; *** significant at 1%